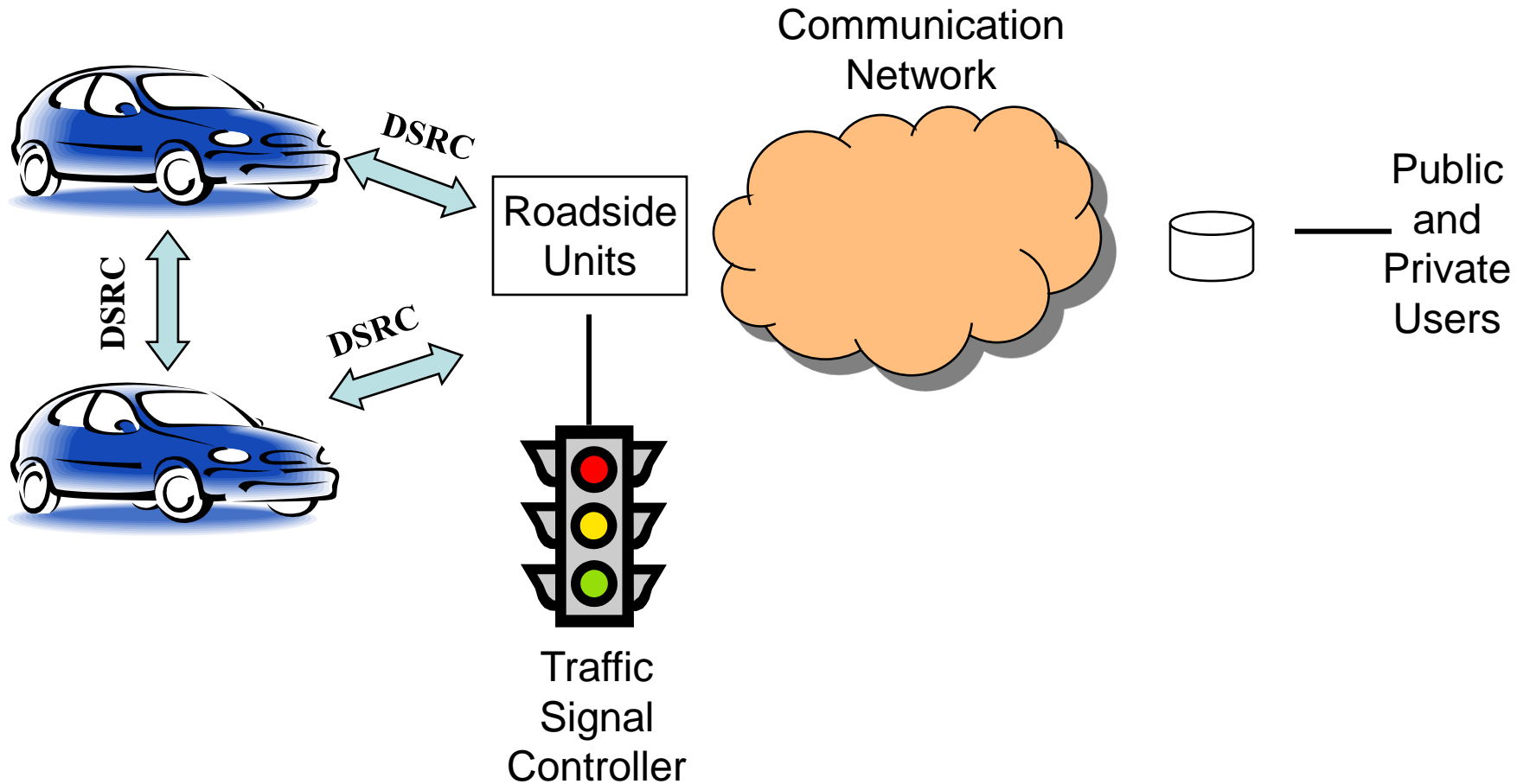




Vehicle Infrastructure Integration (VII)

Florida Transportation Commission
May 30, 2008
George Gilhooley

Vehicle Infrastructure Integration (VII)



VII Coalition

- USDOT
- American Association Highway and Transportation Officials (AASHTO)
- International Bridge, Tunnel and Turnpike Association (IBTTA)
- ITS America
- Local Government
- VII Consortium (VIIC)

VII Consortium

- BMW
- Chrysler LLC
- Ford
- General Motors
- Honda
- Mercedes Benz, NA
- Nissan
- Toyota
- Volkswagen

- GPS
- Communication
 - Vehicle to vehicle
 - Vehicle to infrastructure
- Human Interface
- Anonymous Probe Data
 - Speed and direction
 - Braking
 - Wipers, temperature, etc

DSRC Communication

- FCC Licensed 75 MHz at 5.9 GHz
- Primary Purpose is Safety
- Commercial Applications Allowed
- Standards
 - IEEE 802.11p
 - IEEE 1609 Family
 - SAE J2735 – Message Set

VII Infrastructure



- Existing Camera Poles
- Traffic Signals
- Communication Network
- User Access Point

Collision Avoidance

- Run Off the Road Warning
- Lane Changing Warning
- Stop Ahead Warning
- Signalized Intersection
 - Violation Warning
 - Timing Modification

Traveler Information



- Real-time travel data
- Navigation
- In-vehicle Signing
 - Static
 - Dynamic

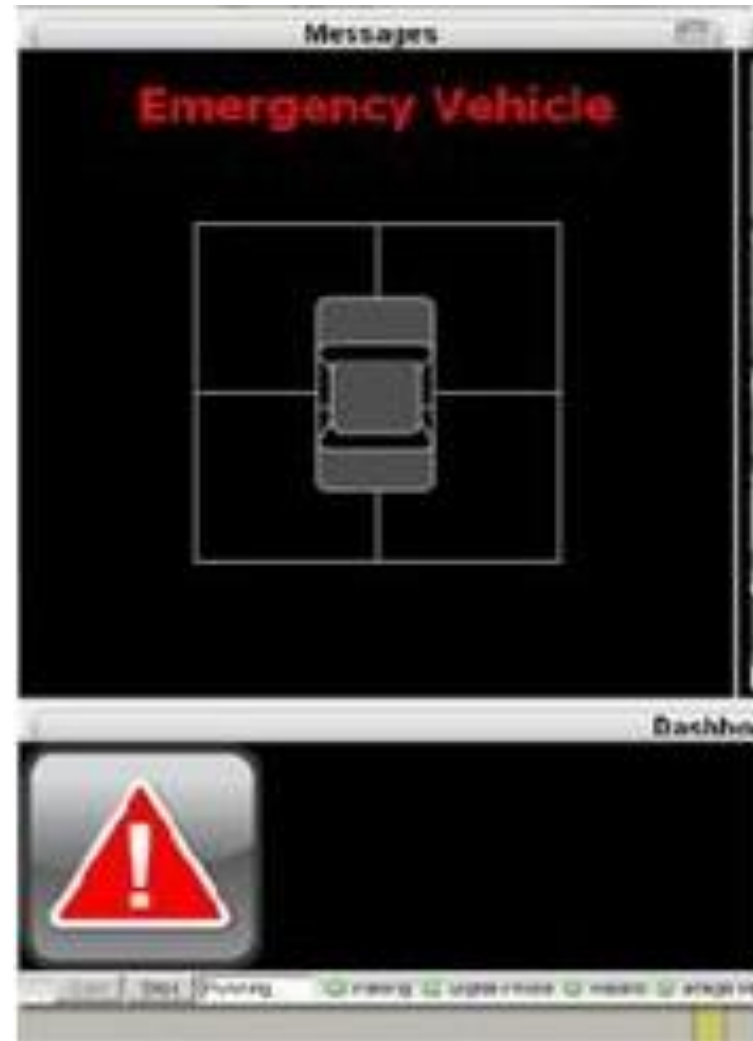
In-vehicle Signing

- Work Zone Signing
 - When needed
 - Changeable



In-vehicle Signing

- Emergency Vehicle Warning
 - Move Over Law
 - Which direction



In-vehicle Signing

- Clearance Signing
 - Warning message
 - Alternate route information

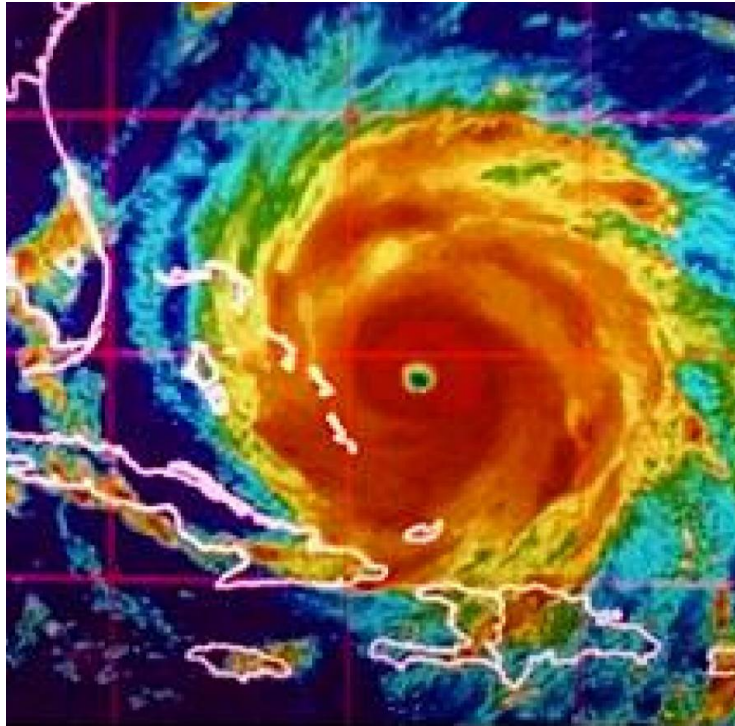


In-vehicle Signing

- Parking Information
 - Availability
 - Options
 - Directions



Weather Information



- Traction Control
- Wipers
- Road Level Temperature

Electronic Payment

- Tolling
 - National Interoperability
- Private
 - Fuel
 - Food

Current Activities

- Proof of Concept Testing
 - Detroit
 - Palo Alto
- Task Teams
 - Benefit Cost Analysis
 - Policy and Deployment Issues
 - Outreach
- USDOT SAFE TRIP-21

Vehicle Miles Pricing

- 20 aftermarket equipped vehicles
- District Five – nine counties
- Collected revenue
 - fuel tax
 - Variable priced mileage fee
- Distribution
 - Florida Statute/Local Option
 - Roadway traveled

Vehicle Miles Pricing

- **Fuel Tax**

- Fuel used
 - Taxes Collected
- Distribution of tax per current formula
 - State
 - County
 - City

- **Vehicle Miles Pricing**

- Miles driven fee
 - Peak
 - Off-peak
 - System used
- Distribution of fee
 - State
 - County
 - City
 - Toll

For additional information, please contact
George Gilhooley, PE

ggilhooley@hntb.com